

- 27 -

## Patent Claims

1. Element of a light-emitting display  
having a light-emitting means (8) which emits  
5 light when a current ( $i_{\text{OLED}}$ ) flows through it,  
having a first current control means (4) which is  
connected in series with the light-emitting means  
(8), wherein a control signal is supplied to a  
control electrode of the first current control  
10 means (4),  
and having a first switching means (12) which is  
controlled by a first switching signal and is  
arranged in the feed to the control electrode,  
**characterized in that** a second switching means  
15 (10) controlled by a second switching signal is  
arranged in series with the first switching means  
(12) in the feed to the control electrode of the  
first current control means (4).
- 20 2. Element according to Claim 1, **characterized in  
that** a control electrode of a second current  
control means (2) is switchably connected to the  
control electrode of the first current control  
means (4) via the first and second switching means  
25 (10, 12).
3. Element according to Claim 2, **characterized in  
that** the first and second current control means  
(4, 2) form a current mirror circuit.  
30
4. Element according to Claim 2 or 3, **characterized  
in that** a drive signal ( $i_{\text{ramp}}$ ) is switchably  
supplied to the second current control means (2)  
via third switching means (13).  
35
5. Element according to one or more of the preceding  
claims, **characterized in that** a signal holding  
means (6) is connected to the control electrode of

- 28 -

5 the first current control means (4) such that the control signal is held when the first and/or second switching means (10, 12) interrupts the supply of the control signal to the control electrode of the first current control means (4).

6. Element according to Claim 5, **characterized in that** the control signal and/or the signal held by the signal holding means can be put into a  
10 predetermined state by means of a fourth switching means.

7. Light-emitting display, **characterized in that** elements according to one or more of the preceding  
15 claims are arranged in lines and/or columns.

8. Light-emitting display according to Claim 7, **characterized in that** the control signal is supplied to a plurality of elements in a line  
20 and/or a column in parallel.

9. Light-emitting display according to Claim 8, **characterized in that** a common first switching signal is supplied to a plurality of first  
25 switching means (12) in elements in a line and/or a column.

10. Method for operating an element of a light-emitting display according to the precharacterizing part of Claim 1, **characterized in that** the method includes the following steps:  
30 - closing the first switching means (12) at the start of the cycle;  
- applying a control signal to the first current control means (4) which control signal rises  
35 constantly from a predetermined starting value;  
- opening the first switching means (12) when the luminous flux emitted by the light-emitting means

- 29 -

(8) reaches a desired magnitude; and  
- initiating a new cycle when the applied control signal reaches a predetermined final value.

- 5 11. Method according to Claim 10, wherein the element of the light-emitting display comprises a second switching means (10) connected in series with the first switching means (12), **characterized in that** the method further includes the following steps:
- 10 - closing the second switching means (10) before or after closing the first switching means (12;) and  
- opening the second switching means (10) before a new cycle is initiated.
- 15 12. The method as claimed in Claim 11, **characterized in that** the first and second switching means (12, 10) are used for selecting elements from a multiplicity of elements arranged in columns or lines.
- 20 13. Method according to Claim 11 or 12, **characterized in that** a plurality of light-emitting elements in a column or in a line are actuated in parallel and in that the columns or lines are actuated sequentially.
- 25 14. Method according to one of Claims 10 to 13, wherein the application of the first control signal rising constantly from a starting value is the impression of a current ( $i_{\text{ramp}}$ ) into a second current control means (2) which is switchably connected to the first current control means (4).
- 30 15. Method according to one of Claims 10 to 14, **characterized in that** a fourth switching signal is temporarily applied to a fourth switching means by means of which a signal held in signal holding
- 35

- 30 -

means (6) is set to a defined state.

16. Method according to one of Claims 10 to 15,  
**characterized in that** an idle time is provided  
5 between two cycles.